

## Chagas Disease: Connections Between Humans, Animals and the Ecosystem

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### Synopsis

Chagas disease is an infectious disease caused by the parasite *Trypanosoma cruzi* and transmitted by the kissing bug (triatomine insects). It is a well-known disease affecting humans and animals in South America and is an emerging disease with zoonotic potential that is under recognized in the United States, predominately the southern states. This case study of a dog diagnosed in Texas aims to leverage technology to enhance students' knowledge and understanding of Chagas disease including the clinical presentation and cardiac manifestations in dogs, when to consider testing for infectious diseases, kissing bug vector ecology and epidemiology, and client education including animal and human health aspects and vector management. **The case highlights the One Health initiative to focus attention on the importance of connections between humans, animals and the ecosystem.**

The case was developed in collaboration with Dr. Jodi Korich and The Center for Educational Technologies at Texas A&M. A web-based case study allows learners to make a series of clinical decisions as they follow a real case from diagnosis through treatment. Case studies are supplemented with instructional video lectures, diagnostic charts, and other useful reference materials in an interactive and media rich format. Content was developed by faculty and students with expertise in clinical cardiology in dogs (Saunders) and the ecology and epidemiology of the vector (Hamer, Curtis, Tenney).

### Audience

Students from all levels (undergraduate, graduate, professional) of veterinary medicine, human medicine, parasitology and public health.

### One Health Framework component addressed by this case study:

Microbiologic influences on health and disease – Long standing and re-emergent disease with zoonotic potential.

- Infectious disease surveillance
- Infectious disease prevention
- Convergence of human and animal health
- Communications and outreach



Kissing bug  
images courtesy of  
Gabriel Hamer

